

Ex vivo experiments

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An abbreviated version of this protocol was published in Science Translational Medicine in Feb 2022

An off-the-shelf bioadhesive patch for sutureless repair of gastrointestinal defects

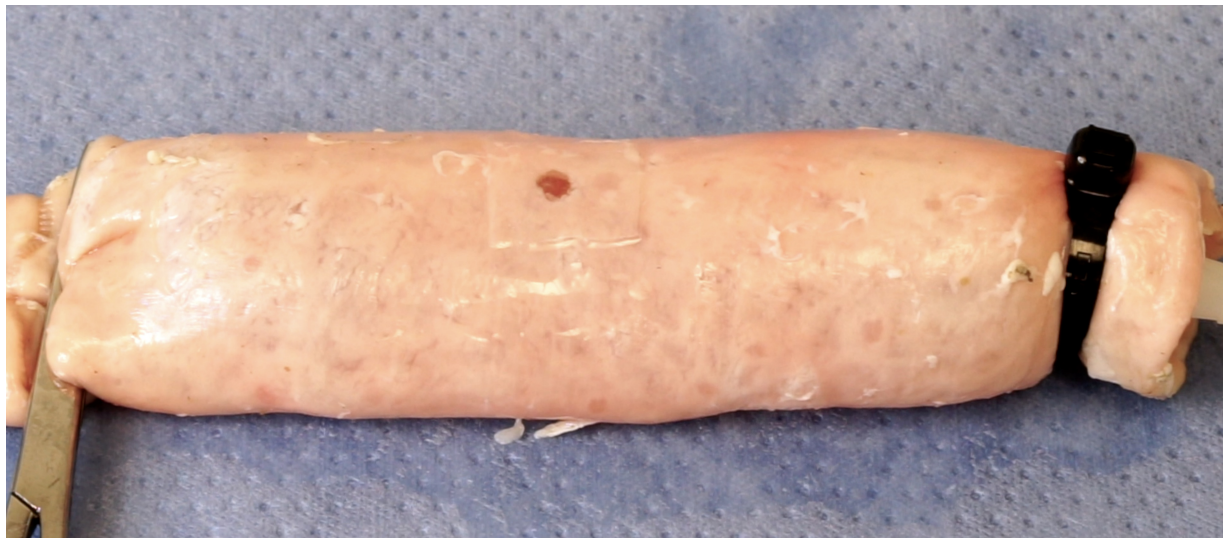
DOI: 10.1126/scitranslmed.abh2857

Detailed protocol

Burst pressure measurement (modified from ASTM F2392-04)

To measure burst pressure of sealed ex vivo porcine colon, the following protocol was used.

1. Seal one-end of the colon with hemostat.
2. Connect another end of the colon with barbed tube fitting and fix liquid-tight with cable tie (picture of the setup showed below).



1. Using T-shape barbed tube connector, connect 1) colon, 2) pressure sensor, and 3) syringe pump like configuration in fig. S8D of the published paper.
2. Introduce PBS or saline at the rate of 2 ml/min while the applied pressure is monitored by the pressure sensor.
3. Record the maximum pressure before burst as the burst pressure.

How to cite: (Readers should cite both the Bio-protocol preprint and the original research article where this protocol was used)

1. Yuk, H. (2022). Ex vivo experiments. Bio-protocol Preprint. bio-protocol.org/prep1670.
2. Wu, J., Yuk, H., Sarrafian, T. L., Guo, C. F., Griffiths, L. G., Nabzdyk, C. S. and Zhao, X. (2022). An off-the-shelf bioadhesive patch for sutureless repair of gastrointestinal defects. Science Translational Medicine 14(630). DOI: [10.1126/scitranslmed.abh2857](https://doi.org/10.1126/scitranslmed.abh2857)

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